1. A plant controller using a modulation algorithm, the controller comprising:

5   means for providing a preliminary control input to be used for controlling an output of the plant to a desired value;

means for dividing the preliminary control input into a plurality of components;

means for modulating at least one of the plurality of components; and

10   and

means for adding the modulated component to the other components to generate a control input.

2. The plant controller as claimed in claim 1, wherein said plurality of

15   components include:

a first component extracted by filtering the preliminary control input; and

a second component extracted from a difference between the preliminary control input and the first component, said second component

20   being within a predetermined range of absolute values; and

wherein said means for modulating modulates the second component.

3. The plant controller as claimed in claim 1, wherein said means for

25   modulating uses an algorithm selected from a group comprising a $\Delta\Sigma$ modulation algorithm, a $\Sigma\Delta$ modulation algorithm and a Δ modulation algorithm.

4. The plant controller as claimed in claim 2, wherein said filtering is

30   performed by a linear filter or a median filter.

5. The plant controller as claimed in claim 4, wherein said filtering is further performed by a ε filter.

6. The plant controller as claimed in claim 2, wherein said filtering is performed by a ε filter.

7. A controller for a variable lift mechanism of an internal-combustion engine, the controller using a modulation algorithm and comprising:

means for providing a preliminary control input to be used for controlling a maximum lift amount of the variable lift mechanism to a desired lift amount;

means for dividing the preliminary control input into a plurality of components;

means for modulating at least one of the plurality of components; and

means for adding the modulated component to the other components to generate a control input.

8. A controller for a variable phase mechanism of an internal-combustion engine, the controller using a modulation algorithm and comprising:

means for providing a preliminary control input to be used for controlling a cam phase of the variable phase mechanism to a desired phase;

means for dividing the preliminary control input into a plurality of components;

means for modulating at least one of the plurality of components; and

means for adding the modulated component to the other components to generate a control input.

9. An air/fuel ratio controller of an internal-combustion engine, the controller using a modulation algorithm and comprising:

    means for providing a preliminary control input to be used for controlling an output of an exhaust gas sensor on a desired value;

    means for dividing the preliminary control input into a plurality of components;

    means for modulating at least one of the plurality of components; and

    means for adding the modulated component to the other components to generate a control input.

10. A controller for an automatic transmission mechanism of an internal-combustion engine, the controller using a modulation algorithm and comprising:

    means for providing a preliminary control input to be used for controlling an output position of the automatic transmission mechanism on a desired position;

    means for dividing the preliminary control input into a plurality of components;

    means for modulating at least one of the plurality of components; and

    means for adding the modulated component to the other components to generate a control input.

11. A method for controlling a plant, comprising:

    providing a preliminary control input to be used for controlling an output of the plant to a desired value;

    dividing the preliminary control input into a plurality of components;

modulating at least one of the plurality of components; and

adding the modulated component to the other components to generate a control input.

5   12. The method of claim 11, wherein said plant is an internal combustion engine.